Flight Simulator™ Quick Reference

Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399

These shortcut keys are for a standard keyboard with the function keys across the top. For information on other keyboards and key controls, see Appendix D, "Keyboard Summary."

Microsoft Flight Simulator

Flying Controls

Airplane Controls

Autopilot on/off	Z
Brakes	PERIOD
Carb heat on/off	H
Coordinates on/off	SHIFT+Z
Differential brakes	F11 and F12
Jet engine shut down	CTRL+SHIFT+F1
Jet starter	J, PLUS SIGN (+) or MINUS SIGN (-)
Land Me	X
Landing gear up/down	G
Lights on/off	L
Magnetos	M, PLUS SIGN (+) or MINUS SIGN (-)
Parking brakes on	CTRL+PERIOD
Parking brakes off	PERIOD
Pause/resume flight	P
Smoke/spray on/off	I
Sound on/off	Q
Strobes on/off	O

Ailerons (bank)

Left	KEYPAD 4
Center	KEYPAD 5
Right	KEYPAD 6

Elevator (pitch)

Nose up	KEYPAD 2
Nose down	KEYPAD 8
Trim up	KEYPAD 1
Trim down	KEYPAD 7

Flying Controls, cont'd

Rudder (yaw)

Left	KEYPAD ZERO (0)
Center	KEYPAD 5
Right	KEYPAD ENTER

Throttle (power)

Cut	F1
Increase	F3 or KEYPAD 9
Decrease	F2 or KEYPAD 3
Full	F4

Flaps

Retract (0°)	F5
10°	F6
30°	F7
Extend (40°)	F8

Radio Selection

ADF	A, AA, AAA
COM	C or CC (fractional)
DME	F+1 or F+2—toggle NAV 1 or NAV 2 PLUS SIGN (+)—toggle distance from/speed toward station
NAV	N+1 or N+2, NN (fractional)
Transponder	T, TT, TTT, or TTTT
VOR/OBI	V+1 or V+2

Radio Frequency Setting

Increase	Select radio, PLUS SIGN (+)
Decrease	Select radio, MINUS SIGN (-)

Slewing Controls

Set aircraft position to North	
Heading, level pitch, level bank	SPACEBAR

Slewing Controls, cont'd

Turn Slewing On/Off	Y

Altitude

Up	Q
Up fast	F4
Freeze	F2 or F3
Down fast	F1
Down	A

Pitch

Nose up	9
Nose up fast	F5
Freeze	F6 or F7
Nose down fast	F8
Nose down	ZERO (0)

Bank

Left	KEYPAD 7
Right	KEYPAD 9
Freeze	KEYPAD 5

Heading

Left	KEYPAD 1
Right	KEYPAD 3
Freeze	KEYPAD 5

Movement

Forward	KEYPAD 8
Backward	KEYPAD 2
Left	KEYPAD 4
Right	KEYPAD 6
Freeze	KEYPAD 5

* 5 1 4 0 7 *

Microsoft®

Microsoft Flight Simulator Troubleshooting Guide for Setup

Memory requirements

To install and run Microsoft Flight Simulator, you need a computer with at least 1 megabyte (MB) of memory and at least 530 kilobytes (K) of free conventional memory available, with additional extended or expanded memory.

If your computer does not have sufficient free conventional memory or sufficient free disk space, the Setup program reports the problem and stops. Setup also informs you if your system is not configured for expanded memory. Before you can run Flight Simulator, you'll need to free up 530K of conventional memory by reconfiguring your computer.

Extended and expanded memory

Most of today's computers are configured with memory beyond 640K. This memory is referred to as extended memory. Flight Simulator uses extended memory for displaying graphics, but it performs faster if you configure extended memory as expanded memory. You can do this using the memory utilities provided with MS-DOS 5.0 and MS-DOS 6.0, or you can use third-party expanded-memory utilities.

To reconfigure your computer using MS-DOS version 6.0

MS-DOS version 6.0 is designed to help you configure your system for optimum performance. It comes with Memmaker, a utility designed to help you free up memory and configure your system for expanded memory.

1. At the MS-DOS prompt, type **memmaker**
2. Choose the Express Setup option and follow the instructions.
3. Make sure that you configure your computer to run with expanded memory.

After Memmaker configures your system, it reports the amount of free conventional memory. This is likely to be greater than 530K, which means your computer now has sufficient memory to run Flight Simulator.

To reconfigure your computer using MS-DOS version 5.0

With MS-DOS version 5.0, you can load MS-DOS into extended memory, and thereby free up additional conventional memory for Flight Simulator. MS-DOS version 5.0 comes with EMM386, a utility that configures your system for expanded memory.

1. At the MS-DOS prompt, type **edit c:\config.sys**
2. Add the following lines to the top of the CONFIG.SYS file (if necessary):

   DEVICE=C:\DOS\HIMEM.SYS

   DOS=HIGH

   DEVICE=C:\EMM386.EXE 2048
3. From the File menu, choose Save.
4. Restart your computer to make the changes take effect.

If you still don't have sufficient memory to run Flight Simulator, remove any terminate-and-stay resident (TSRs) and device utilities from your CONFIG.SYS or AUTOEXEC.BAT file. For more information, see the *Microsoft MS-DOS User's Guide.*

To reconfigure your computer using MS-DOS version 4.0 or earlier

In order to free up additional memory with MS-DOS version 4.0 or earlier, you can modify your CONFIG.SYS or AUTOEXEC.BAT files to remove TSRs and device utilities. See the *Microsoft MS-DOS User's Guide* before editing these files—improper modifications can cause problems.

Creating a System Startup Disk

If you are not able to free up sufficient memory or do not want to modify your CONFIG.SYS or AUTOEXEC.BAT files in order to run Flight Simulator, you can create a system startup disk (or boot disk) and use it to start your system when you run Flight Simulator.

1. Insert Microsoft Flight Simulator Disk 2 into your 3.5-inch disk drive.
2. Change to the drive where you inserted Disk 2.

   For example, if Disk 2 is in drive A, type **a:** and then press ENTER.
3. To run the FSSYSTEM program and create a system startup disk, type **fssystem** and then press ENTER.

   Follow the instructions, making sure you insert a blank disk into drive A before you format it.
4. When FSSYSTEM is complete, insert the new system startup disk into drive A and restart your computer.

   You will need to use this disk to start your computer every time you run Flight Simulator.
5. After your system starts, insert Microsoft Flight Simulator Disk 1 – Setup into your 3.5-inch disk drive and type **setup**

   Follow the instructions to install Flight Simulator.

Note If your system does not run properly, it may be configured to use devices required in your CONFIG.SYS file (for example, disk-doubling utilities such as Stacker®). If this is the case, you can create your own system startup disk following instructions in the *Microsoft MS-DOS User's Guide.*